

PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q86738

Pascal BRUNA

Appln. No.: 10/532,073

Group Art Unit: 3754

Confirmation No.: 6183

Examiner: Frederick C. NICOLAS

Filed: April 21, 2005

For: ELECTRONIC DISPLAY DEVICE AND FLUID PRODUCT DISPENSING DEVICE
COMPRISING SAME

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest in this appeal is VALOIS SAS (assignee), of France, by virtue of an assignment executed by Pascal BRUNA (inventor), of France, on February 14, 2004. The assignment was previously submitted and was recorded on April 21, 2005, at Reel 017108, Frame 0258.

II. RELATED APPEALS AND INTERFERENCES

Co-pending Application No. 10/532,961, having the same inventor and a common assignee as the present application, is currently on appeal to the Board of Patent Appeals and Interferences. The Examiner has provisionally rejected claims 1-15 of the present application on the ground of nonstatutory obviousness-type double patenting over claims 1-3, 5-11, 13-20 of Co-pending Application No. 10/532,961. Applicant, however, is deferring to address this provisional rejection and is not making any admission to the validity of this provisional rejection by listing Co-pending Application No. 10/532,961 as a related appeal.

III. STATUS OF CLAIMS

Claims 1-15 are pending. Claims 1 and 12 are the only independent claims. All claims remain rejected.

The rejections are summarized as follows:

Claims 1-15 remain provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-3, 5-11, 13-20 of copending Application No. 10/532,961. Applicant is not addressing this provisional rejection on appeal.

Claims 1-15 remain rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).

All of the claims pending in the appeal are set forth in their entirety in the Claims Appendix, attached to this Brief on Appeal.

IV. STATUS OF AMENDMENTS

A non-final Office Action was mailed on October 6, 2008. In response, Applicant filed an amendment under 37 C.F.R. § 1.111 on January 6, 2009, which amended independent claim

1. This amendment was entered by right.

A final Office Action was mailed on April 22, 2009. In response, Applicant filed a Notice of Appeal on July 22, 2009, and did not amend any of the claims after the final Office Action was issued.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claims 1 and 12 are directed toward an electronic display device 20 that has a display member 21. (*See e.g.*, original specification, page 3, lines 22-29; FIGS. 1, 2.)

Regarding independent claim 1, the display member 21 is permanent so that no energy is required to keep the display unchanged. (*See e.g.*, original specification, page 3, lines 30-37.) Accordingly, the display device 20 operates without a battery. (*See e.g.*, original specification, page 4, lines 26-30.) Rather, the energy required to change the display is created by an interaction between two elements, thereby creating an electric pulse. (*See e.g.*, original specification, page 4, lines 1-21.) The electronic pulse is processed by an electronic circuit 25 before being applied to the display member 21 in order to change the display. (*See e.g.*, original specification, pages 22-30.)

Regarding independent claim 12, the permanent display member does not require energy to keep the display unchanged and requires electrical energy to change the display. (*See e.g.*, page 3, lines 30-37.) The electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other. (*See e.g.*, page 4, lines 1-21.)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues on appeal are summarized as follows:

1. Whether claims 1-15 are properly rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).

VII. ARGUMENT

A. Claims 1-15 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017) and Liou (US 5,895,159).

In rejecting claims 1-15 over Walker et al. (US 5,564,414) in view of Barberi et al. (US 6,327,017), and further in view of Liou (US 5,895,159), the grounds of rejection state:

Walker et al. disclose an electronic display device (130) including a display member (131), the device being characterized in that the display member is permanent (col. 7, II. 35-57), the energy required to change the display being created by interaction between two elements (123,135), thereby creating an electric pulse, the pulse being processed by an electronic circuit before being applied to the display member in order to change its display (col. 7, II. 35-57), the display member is of the liquid crystal display (LCD) type as seen in Figure 2D, a fluid dispenser (10), a reservoir (13), striker pin (123), a spring (128). Walker et al. lack that no energy is required to keep the display unchanged and the display device operates without a battery. Barberi et al. teach the use of a bistable nematic liquid crystal display for use small portable devices (col. 19, II. 50-55). Liou discloses a current producer (60) that produces an instantaneous current upon a pressing bar (31) striking an internal flint (col. 2, II. 47-53) in order to avoid the use of an external power source (col. 1, II. 45-55).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to utilize the bistable nematic LCD of Barberi et al. in place of the LCD of Walker et al. in order to preserve power. The modified reference would require no energy to keep the display unchanged and only a small electric pulse to change it.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have replaced the battery and switch mechanism of Walker et al. and Barberi et al. with the current producer of Liou and its associated components, in order to produce the electric pulse needed to change the LCD display without the need for an external power supply.

(Final office action, dated April 22, 2009, pages 3-4.)

Independent Claims 1 and 12

To establish an obviousness rejection, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, Applicant notes that “impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.” MPEP § 2142. In the current case, there is nothing in the prior art to provide a reasonable rationale as to why it would be obvious to a person of ordinary skill to combine Walker, Barberi, and Liou to produce all of the recited features of independent claim 1.

Independent claim 1 recites “said display member (21) is permanent so that no energy is required to keep the display unchanged, said display device (20) operating without a battery, the energy required to change the display being created by interaction between two elements, thereby creating an electric pulse, said pulse being processed by an electronic circuit (25) before being applied to the display member (21) in order to change the display.”

Independent claim 12 recites “a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other.”

The Examiner concedes that none of the applied three patents disclose the above features of independent claims 1 and 12, but relies on a combination of these three patents to piece together the claimed subject matter, alleging that it would have been obvious to one of ordinary

skill to select unrelated features from the three references to produce the claimed subject matter. However, there is no reasonable rationale as to why it would be obvious to a person of ordinary skill to alter the references in the manner set forth in the grounds of rejection. In fact, the applied patents, taken individually or as a whole, teach away from the claimed invention.

Walker discloses a Metered Dose Inhaler (MDI) with an electronic counter. Regarding independent claim 1, Walker does not disclose, *inter alia*, that the “display member (21) is permanent so that no energy is required to keep the display unchanged, said display device (20) operating without a battery, the energy required to change the display being created by interaction between two elements, thereby creating an electric pulse.” Regarding independent claim 12, Walker does not disclose, *inter alia*, “a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other.”

Rather, in Walker, the counter uses a conventional LCD display powered by a battery. (See for example Walker, col. 8, line 51 to col. 9, line 10.) The counter is actuated by closing an electronic microswitch connected to the battery. The closing of the microswitch is provided by contact: as long as contact is maintained, the switch and the electrical circuit are closed. When contact is removed, the switch and the electrical circuit are opened again. (See Walker col. 7, lines 36-52).

Barberi discloses bistable LCD devices having monostable anchorings. Regarding independent claim 1, Barberi does not disclose, *inter alia*, “said display device (20) operating

without a battery, the energy required to change the display being created by interaction between two elements, thereby creating an electric pulse.” Regarding independent claim 12, Barberi does not disclose, *inter alia*, “wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other.”

Rather, the Examiner only relies on Barberi as having electrical fields defined between electrodes to operate these monostable anchorings of the LCD devices. Barberi mentions that the display screens are used in portable devices, like mobile telephones, electronic organizers or diaries, as well as video applications. All these applications clearly require complex screens with multiple information display and require electrical power or energy to operate. Barberi explicitly states that in the above noted devices, the screen must be refreshed as infrequently as possible in order to preserve the power, indicating that the LCD of Barberi was attached to a power source such as a battery. (col. 19, l. 50-54).

Liou discloses a heat-melting glue gun having a current-producer that creates a short-circuit spark to ignite gas jetting from a nozzle, which is entirely unrelated to electronic display devices of Walker and Barberi. (See Liou, col. 2, lines 47-60.) Accordingly, regarding independent claim 1, Liou does not disclose at least “said display member (21) is permanent so that no energy is required to keep the display unchanged, said display device (20) operating without a battery, the energy required to change the display being created by interaction between two elements, thereby creating an electric pulse, said pulse being processed by an electronic circuit (25) before being applied to the display member (21) in order to change the display.” Regarding independent claim 12, Liou does not disclose at least “a permanent display member

that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other.”

Rather, in Liou, the spark is used to ignite a gas. The spark is created by striking a flint with a pressing bar, thus producing instantaneous electric current which is then directed towards electrodes provided near the nozzle. (See Liou, col. 2, lines 47-60.) Thus, Liou only indicates that the current producer is capable of igniting gas from a nozzle, which is entirely different than powering an LCD display. For one skilled in the art to have looked to Liou for a technical solution, that person, starting from Walker et al., would have required some rationale, hint or motivation to search a document concerning glue guns.

Furthermore, nothing in Walker et al. indicates that the electric power supply is inadequate or should be replaced. As such, it would not have been obvious to one of ordinary skill in the art to search for a solution to an unknown problem, let alone combine Liou with either Walker or Barberi.

In view of the disclosures of Walker, Barberi, and Liou, as described above, there would be no rational reasoning for one to combine these references. In Walker, a switch is closed by closing an electric circuit powered by a battery. Barberi also discloses that the device disclosed in that reference is powered by a battery. Thus, even when considering the non-obvious combination of Walker and Barberi, these references would teach to one skilled in the art that it is necessary to provide an electric power supply to power the LCD screen by a battery or other stored energy source. Since both Walker and Barberi require that a battery source be provided to

power the display, these references teach away from removing the battery as the energy source for the display, let alone replacing the battery with the flint of Liou that is used to ignite a gas to produce a flame. Again, this is entirely unrelated to the devices disclosed in Walker and Barberi which disclose displays that are powered by a battery. Nothing would indicate to one skilled in the art that the current producer in Liou would be suitable to power an LCD screen, such as the ones disclosed in Walker or Barberi.

In view of the above independent claims 1 and 12 are non-obvious over the cited art.

Dependent Claims

Dependent claims 2-11 and 13-15 are allowable at least by virtue of their respective dependencies from independent claims 1 or 12.

Furthermore, even if one were to improperly combine the references as alleged by the Examiner, this still would not produce all of the recited features of dependent claims 6 and 7.

Claim 6 recites that “the interaction between two portions (10, 11; 1, 2) of said device moving relative to each other while the device is being actuated, is transformed by an electromechanical converter into an electric pulse used to change the display.”

Claim 7 recites that “the electric pulse required to change the display is created by a striker pin (11) that is displaced against a contactor (2) while the dispenser device is being actuated.”

Regarding these features, the Examiner states “one having ordinary skill in the art would replace the battery and switch mechanism of Walker et al. and Barberi et al. with the current producer of Liou and its associated components, in order to produce the electric pulse needed to

change the LCD display without the need for an external power supply.” (Final Office Action dated April 22, 2009, page 5.) However, the examiner does not allege, and none of the references disclose, that the interaction between two portions while the device is being actuated is transformed by an electromechanical converter into an electric pulse or that a striker pin is displaced against a contactor while the dispenser device is being actuated to create the electric pulse.

As noted above, the energy for the LCD in Walker is stored in a battery, and the actuation of the device in Walker merely closes a circuit to supply current from the battery. The actuation of the device in Walker, however, does not transform mechanical movement into an electric pulse or generate the electrical pulse used to power the display.

Barberi does not disclose the actuation of any device and therefore does not disclose the above noted features of independent claims 1 and 12.

Liou discloses that the trigger of the glue feeding means 50, which actuates the glue gun, and the pressing bar 31, which generates the spark, are separate elements and independently controlled. Thus, in Liou, there is a specific energy creating system that is separate from the glue dispensing system. The user would have to provide two different actions to create a spark and actuate the device: (1) pressing the bar 31 to create a spark to ignite the gas, and (2) pressing the trigger 50 to feed the glue. As such, in Liou, the spark is not created while the glue gun is being actuated.

Thus, none of the references disclose a device where the energy is created or generated during actuation of the device. Accordingly, even if, for the sake of argument, one were to

combine Walker with Barberi and Liou, the result would be the Walker device having a current-producer as described in Liou, requiring a separate actuation to create the energy. As such, claims 6 and 7 are not obvious in view of the cited art.

B. Conclusion

The USPTO is directed and authorized to charge the fee required under 37 C.F.R. § 41.37(a) and 1.17(c), and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Raja N. Saliba
Registration No. 43,078

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: October 22, 2009

CLAIMS APPENDIX

CLAIMS 1-15 ON APPEAL:

1. (previously presented): An electronic display device (20) including a display member (21), said device being characterized in that said display member (21) is permanent so that no energy is required to keep the display unchanged, said display device (20) operating without a battery, the energy required to change the display being created by interaction between two elements, thereby creating an electric pulse, said pulse being processed by an electronic circuit (25) before being applied to the display member (21) in order to change the display.

2. (original): A display device according to claim 1, in which said display member (21) is of the liquid crystal display (LCD) type.

3. (previously presented): A display device according to claim 1, in which said display member (21) includes bistable nematic crystals.

4. (previously presented): A display device according to claim 1, in which said display device (20) forms part of a dose indicator or counter for a fluid dispenser device.

5. (previously presented): A fluid dispenser device comprising: a body (1); a fluid reservoir (10); a dispenser member (15), and a dose counter for counting the number of doses that have been dispensed or that remain to be dispensed from the reservoir (10), said device

being characterized in that said dose counter includes a display device (20) according to claim 1.

6. (original): A dispenser device according to claim 5, in which the interaction between two portions (10, 11; 1, 2) of said device moving relative to each other while the device is being actuated, is transformed by an electromechanical converter into an electric pulse used to change the display.

7. (previously presented): A dispenser device according to claim 5, in which the electric pulse required to change the display is created by a striker pin (11) that is displaced against a contactor (2) while the dispenser device is being actuated.

8. (original): A dispenser device according to claim 7, in which said contactor (2) is held stationary relative to the body (1), and said striker pin (11) co-operates with a spring (12).

9. (previously presented): The display device according to claim 1, wherein the energy required to change the display is created by friction.

10. (previously presented): The display device according to claim 1, wherein the energy required to change the display is created by impact.

11. (previously presented): The dispenser device according to claim 5, wherein the

dispenser member is a pump or a valve.

12. (previously presented): An electronic display device comprising a permanent display member that does not require energy to keep the display unchanged and that requires electrical energy to change the display; and

wherein the electrical energy required to change the display is generated by interaction between two physical portions of the device moving relative to each other.

13. (previously presented): The display according to claim 12, wherein the electrical energy required to change the display is generated without a battery.

14. (previously presented): The display according to claim 12, wherein the display is a liquid crystal display (LCD).

15. (previously presented): The display according to claim 12, wherein the display comprises bistable nematic crystals.

EVIDENCE APPENDIX:

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

No evidence has been submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132.

RELATED PROCEEDINGS APPENDIX

The related appeal identified in Section II is currently pending and the Board has not yet rendered a decision. Accordingly, there are no decisions for Applicant to submit pursuant to 37 C.F.R. § 41.37(c)(1)(ii).